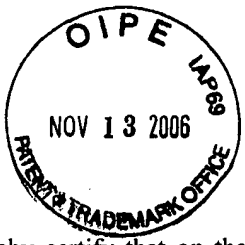

PATENT

I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

November 6, 2006 Ayesha J. Shaikh

Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	: 09/823,935	Confirmation No.	: 7586
Applicants	: James R. Peterson, Robert H. Mullis and Gregory M. Hunter		
Filed	: March 30, 2001	Attorney Docket No.	: 500891.01
Art Unit	: 2672	Customer No.	: 27,076
Examiner	: Jin-Cheng Wang		
Title	: MULTI-SAMPLE METHOD AND SYSTEM FOR RENDERING ANTIALIASED IMAGES		

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated below.

REMARKS

Claims 1-6, 14-32, 41-48, 86, 88, and 91 are pending in the present application. In the office action mailed August 21, 2006 (the "Office Action"), the Examiner rejected claims 41-48 and 88 under 35 U.S.C. 112, first paragraph. The Examiner further rejected claims 23-28 and 91 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,731,301 to Sato *et al.* (the "Sato patent") and rejected claims 1-6, 14-22, 41-48, and 86 under 35 U.S.C. 103(a) as being unpatentable over the Sato patent. Claims 29-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Sato patent in view of U.S. Patent No. 6,501,483 to Wong *et al.* (the "Wong patent").

The following remarks are focused on the Examiner's rejection of claims 41-48 and 88 under 35 U.S.C. 112, first paragraph, and the rejection of claims 1-6, 14-22, 41-48, and 86 under 35 U.S.C. 103(a).

The previously filed responses to office actions will be referenced as follows: response filed June 26, 2003 ("Response I"); response filed January 6, 2004 ("Response II"); response filed August 2, 2004 ("Response III"); response filed May 13, 2005 ("Response IV"); and response filed June 28, 2006 ("Response V"). A response filed November 17, 2005 is not referenced in this request. Several bases for patentability of the claims of the present application have been presented in Responses I-V. All of the arguments found in the previously filed responses are maintained by Applicants. The present remarks, however, address a subset of the previously presented arguments in order to provide succinct, concise and focused arguments of clear error in fact. In the event an appeal brief is filed, arguments in addition to the ones discussed herein may be presented.

A summary description of various embodiments of the invention is provided in Response I at pages 21-22 and Response II at pages 20-21. A summary description of the Wong patent is provided in Response I at 22-23, Response II at pages 21-22, and Response III at pages 19-20. A summary description of the Sato patent is provided in Response IV at pages 15-19 and Response V at pages 10-12.

The Examiner rejected claims 41-48 and 88 under 35 U.S.C. 112, first paragraph, arguing that the "applicant's specification does not disclose selecting two sample locations from four candidate sampling locations." The Examiner further argued that "[t]he candidate sampling

locations are 16 instead of 4 as claimed. *See* the Office Action at page 5. In making this rejection, the Examiner is ignoring the plain language of claims 41, 42 and 88. For example, claim 41 recites, in summary, a method that includes calculating sample values for pixels using sampling patterns having "less than three sample locations" relative to a pixel. In deciding the locations for the less than three sample locations, a pixel is "divided into a four-by-four array of *sub-regions*" and "four *candidate sampling locations*" are selected from the sub-regions. Each of the less than three sample locations is located at one of the four candidate sampling locations. Thus, contrary to the Examiner's position, there are not 16 candidate sampling locations, but four. There are, however, 16 *sub-regions* per pixel. Claim 42 recite limitations similar to claim 41, except that the sampling patterns have only two sample locations per pixel. Claim 88, which is dependent from claim 86, recites dividing a pixel into a four-by-four array of *sub-pixels*, four *potential sample positions* are located at a respective sub-pixel, and the sampling pattern has two *sample positions* located at two of the four potential sample positions. As with claims 41 and 42, the limitations of claim 86 provide four potential sample positions and not 16.

Support for claims 41-48 and 88 can be found in the specification and drawings. Figures 5a, 5b, 8, and 9 illustrate 16 sub-regions per pixel, and Figures 8 and 9 specifically illustrate four candidate sampling locations consistent with claim 41. Figures 5a and 5b specifically illustrate less than three sampling locations per pixel, each of which is located in one of the four candidate sampling locations. Additionally, the description found at page 11, line 15-page 12, line 12 and page 13, line 11-page 14, line 26 describe various sampling patterns, including sampling patterns that include two sample locations per pixel and have each sample location located in one of four different candidate sampling locations.

For the foregoing reasons, the Examiner's rejection of claims 41-48 and 88 under 35 U.S.C. 112, first paragraph, should be withdrawn.

As previously mentioned, the Examiner rejected claims 1-6, 14-22, 41-48, and 86 under 35 U.S.C. 103(a) as being unpatentable over the Sato patent. *See* the Office Action at page 12. Claims 1, 14, 41, 42, and 86 are independent claims, and claims 2-6 depend from claim 1, claims 15-22 depend from claim 14, and claims 43-48 depend from claim 42.

With respect to the rejection of claims 1, 14, and 41 as being obvious, the Examiner argues that "Sato teaches calculating four sample values for pixels of an image in

accordance with a sampling pattern for each pixel including calculating one sample value, two sample values, three sample values and the four sample values for a sampling pattern for each pixel. Therefore, Sato teaches or suggests the claim limitation of calculating less than three sample values for pixels of an image in accordance with a sampling pattern for each pixel." *See* the Office Action at pages 13, 18, and 26. With respect to the rejection of claims 42 and 86, the Examiner applies the same logic and argues that "only two" is obvious in light of four. *See* the Office Action at pages 30 and 35. The Examiner's arguments are nonsensical. According to the Examiner's logic, the mathematical inequality "4 < 3" would be true and the equality "2 = 4" would be true as well. This is clearly erroneous.

The Examiner argues that the claims 1, 14, 41, 42, and 86 are obvious based on the assumption that "less than three" and "only two" occur as "intermediate results" in getting to four. *See* the Office Action at pages 15, 20, 29, 32, and 35. The Sato patent does not describe intermediate results or the desirability of using less than four sample locations per pixel. The Sato patent teaches using four or more sample locations per pixel, which is directly contrary to the limitations of "less than three" or "only two." Moreover, the Examiner suggests that because the claims use the open ended transitional phrase "comprising," four sample locations per pixel teaches or suggests the limitations of "less than three" and "only two." *See* the Office Action at pages 13, 18, 27, and 30. The Examiner appears to argue that "less than three" is the same as "three" and "only two" is the same as "two," which would then be included in a teaching of four. However, the Examiner cannot selectively read out limitations recited in the claims, especially when the plain meaning of the limitations are clear. The limitations "less than three" and "only two" do not leave much room for interpretation, and that interpretation does not lead one ordinarily skilled in the art to reasonably conclude that four teaches or suggests "less than three" or "only two."

For the foregoing reasons, the claims 1-6, 14-22, 41-48, and 86 are patentable over the Sato patent, and therefore, the Examiner's rejection of the claims under 35 U.S.C. 103(a) should be withdrawn.

Applicants request that the panel find claims 1-6, 14-22, 41-48, 86, and 88 in condition for allowance. With respect to the rejection of claims 23-28 and 91 under 35 U.S.C. 102(e) and claims 29-32 under 35 U.S.C. 103(a), the arguments for patentability are based on

interpretation of the Sato and Wong patents, which have been presented in Responses I-V. As set forth in *OG Notices: 12 July 2005* describing the new pre-appeal brief conference, such arguments are more suited for the traditional appeal process.

Respectfully submitted,

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